STATEMENT OF BASIS

as required by LAC 33:IX.3109 for LPDES facilities where a fact sheet is not required under LAC 33:IX.3311, for draft **Louisiana Pollutant Discharge Elimination System Permit No. LA0123161; AI 152274; PER20070001** to discharge to waters of the **State of Louisiana** as per LAC 33:IX.2311.

The **permitting authority** for the Louisiana Pollutant Discharge Elimination System (LPDES) is:

Louisiana Department of Environmental Quality
Office of Environmental Services
P. O. Box 4313
Baton Rouge, Louisiana 70821-4313

I. **THE APPLICANT IS:** Livingston Parish Council
Juban Crossing
P.O. Box 427
Livingston, LA 70754

II. **PREPARED BY:** Angela Marse

DATE PREPARED: February 19, 2008

III. **PERMIT ACTION:** LPDES permit LA0123161, AI 152274; PER20070001

LPDES application received: August 7, 2007

IV. FACILITY INFORMATION:

A. The application is for the discharge of treated sanitary wastewater from a publicly owned treatment works serving the Juban Crossing development.

B. The permit application does not indicate the receipt of industrial wastewater.

C. The facility is located on the north side of the I-12, west of the Juban Road interchange in Denham Springs, Livingston Parish.

D. The treatment facility consists of an activated sludge plant followed by secondary clarifiers and effluent filters. Disinfection is by chlorination.

E. Outfall 001

Discharge Location: Latitude 30° 28' 25" North
Longitude 90° 54' 52" West

Description: treated sanitary wastewater

Design Capacity: 0.75 MGD

Type of Flow Measurement which the facility is currently using:

Combination Totalizing Meter / Continuous Recorder

V. RECEIVING WATERS:

The discharge is into a tributary of West Colyell Creek (for approximately 1.5 miles), thence into West Colyell Creek, thence into the Amite River in segment 040305 of the Lake Ponchartrain Basin. This segment is listed on the 303(d) list of impaired waterbodies.

The designated uses and degree of support for Segment 040305 of the Lake Ponchartrain Basin are as indicated in the table below[1/]:

Overall Degree of Support for Segment 040305	**Degree of Support of Each Use**						
Not Supported	Primary Contact Recreation	Secondary Contact Recreation	Propagation of Fish & Wildlife	Outstanding Natural Resource Water	Drinking Water Supply	Shell fish Propagation	Agriculture
	Not Supported	Full	Not Supported	N/A	N/A	N/A	N/A

[1/]The designated uses and degree of support for Segment 040305 of the Lake Ponchartrain Basin are as indicated in LAC 33:IX.1123.C.3, Table (3) and the 2004 Water Quality Management Plan, Water Quality Inventory Integrated Report, Appendix A, respectively.

Section 303 (d) of the Clean Water Act, as amended by the Water Quality Act of 1987 and EPA's regulations at 40 CFR 130, require that each state identify those waters within its boundaries not meeting water quality standards. The Clean Water Act further requires states to implement plans to address impairments. LDEQ is developing Total Maximum Daily Loadings Studies (TMDLs) to address impaired waterbodies. Segment 040305 of the Lake Pontchartrain Basin is on the 2004 Integrated 303(d) List of Impaired Waterbodies. The suspected causes of impairment are mercury, nutrients (nitrate/nitrite), dissolved oxygen, pathogen indicators, and phosphorus. To date no TMDLs have been completed for this waterbody. Suspected causes of concern are addressed in a manner consistent with the Department's permitting guidance for implementing Louisiana's surface water quality standards as follows:

Dissolved oxygen

Biological oxygen demand (or BOD) is the amount of oxygen required by bacteria to oxidize biological degradable material (normally organic matter) found in wastewater, effluents, and polluted waters. The test measures the amount of oxygen consumed by a sample by naturally occurring bacteria over a five-day period. Therefore, to protect against potential discharges resulting in DO levels below that of state water quality standards for the receiving waterbody, $CBOD_5$ limits have been placed in the permit. Monitoring for biological oxygen demand is the best indicator by which to measure the potential discharge of oxygen consuming pollutants at levels that will result in dissolved oxygen below that of state water quality standards. (Because ammonia nitrogen limits have also been placed in the permit, $CBOD_5$ has been substituted for BOD_5. This inhibits biological activity associated with nitrogen and prevents overestimate of oxygen demand.) In addition to monitoring for $CBOD_5$, dissolved oxygen is also limited in the permit. This is an instantaneous minimum to ensure the discharge will not create or contribute to oxygen levels below State standards in the receiving waterbody.

Ammonia and nutrients

Nitrate/nitrite and phosphorus are considered nutrients. Nutrients can result in the consumption of dissolved oxygen in the receiving stream making it less available for aquatic life. This Office utilizes ammonia nitrogen as an indicator by which to monitor for the potential presence of nutrients remaining in a waste stream after the treatment process. To protect against the discharge of nutrients into the receiving waterbody at levels which exceed state water quality standards, ammonia nitrogen limits have been placed in the permit.

Pathogen Indicators

Monitoring for fecal coliform is the best indicator for the potential presence of pathogenic organisms in wastewater. To protect against potential receiving water impairments due to pathogens, fecal coliform limits have been established in the permit. Permit limits are reflective of water quality standards for primary contact recreation, a designated use of the receiving stream.

Mercury

Although the source of mercury has been identified as atmospheric deposition, the permittee receives wastewater from several potential mercury sources. Therefore, the permittee will be required to develop a Mercury Minimization Plan Program (MMPP). Should analytical testing required in the MMPP or the TMDL for mercury determine a mercury effluent limitation is necessary; a reopener clause is included in the permit.

VI. ENDANGERED SPECIES:

The receiving waterbody, Subsegment 040305 of the Lake Pontchartrain Basin, is listed in Section II.2 of the Implementation Strategy as requiring consultation with the U.S. Fish & Wildlife Service (FWS) as habitat for the *Gulf Sturgeon*, which is listed as an endangered species. LDEQ, as instructed by the FWLS in a letter dated October 24, 2007 from Boggs (FWS) to Brown (LDEQ), has sent this draft permit to the FWLS for review and consultation.

VII. HISTORIC SITES:

The discharge will be from a new facility. LDEQ has consulted with the State Historic Preservation Officer (SHPO) in a letter dated September 21, 2007 to determine whether construction-related activities could potentially affect sites or properties on or eligible for listing on the National Register of Historic Places. SHPO's response, dated October 22, 2007 stated that the facility as proposed will have no potential effects.

VIII. PUBLIC NOTICE:

Upon publication of the public notice, a public comment period shall begin on the date of publication and last for at least 30 days thereafter. During this period, any interested persons may submit written comments on the draft permit modification and may request a public hearing to clarify issues involved in the permit decision at this Office's address on the first page of the statement of basis. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing.

Public notice published in:

Local newspaper of general circulation
Office of Environmental Services Public Notice Mailing List

For additional information, contact:

Mrs. Angela Marse
Permits Division
Department of Environmental Quality
Office of Environmental Services
P. O. Box 4313
Baton Rouge, Louisiana 70821-4313

IX. PROPOSED PERMIT LIMITS:

Final Effluent Limits:

OUTFALL 001

The facility is a new discharger into an impaired stream not meeting all of its designated uses. Although the discharge travels 1.5 miles before entering the impaired waterbody, new or expanding discharges in excess of 100,000 gallons per day should have appropriate effluent limitations that prevent impact on the impaired stream. According to LDEQ's Pre-TMDL Permittting Strategy (December, 2003), this Office will issue permits that 1.) maintain water quality of impaired streams and 2.) include a reopener clause in the permit to allow for more stringent limits if necessary. Maintaining water quality at existing levels means there will not be any additional significant contribution of pollutants to the waterbody. Thus, new or expanding discharges must have appropriate effluent limitations that prevent any additional impact on the impaired stream. As stated in the letter from Ferguson (EPA) to Region 6 Program Manager dated 1/6/03, a discharger meeting effluent limits of 5mg/l $CBOD_5$, 2mg/l ammonia-nitrogen, and 5 mg/l dissolved oxygen would not cause or contribute to existing impairments. Following finalization of the TMDL, the treatment level required by the TMDL could then be implemented. Therefore, a reopener statement has been included in the permit. The Department of Environmental Quality reserves the right to impose more stringent discharge limitations and/or additional restrictions as a result of the TMDL.

Final limits shall become effective on the effective date of the permit and expire on the expiration date of the permit.

Effluent Characteristic	Montly Avg. (lbs/day)	Monthly Avg.	Weekly Avg.	Basis
$CBOD_5$	31	5 mg/l	10 mg/l	Best Professional Judgement (BPJ) based on the etter from Ferguson (EPA) to Region 6 Program Managers dated 1/06/03.
TSS	31	5 mg/l	10 mg/l	BPJ based on the letter from Ferguson (EPA) to Region 6 Program Managers dated 1/06/03.
Ammonia-Nitrogen	12.5	2 mg/l	4 mg/l	BPJ based on the letter from Ferguson (EPA) to Region 6 Program Managers dated 1/06/03.
Dissolved Oxygen	N/A	5 mg/l	N/A	BPJ based on the letter from Ferguson (EPA) to Region 6 Program Managers dated 1/06/03.

**This Dissolved Oxygen limit is the lowest allowable average of daily discharges over a calendar month. When monitoring is conducted, the Dissolved Oxygen shall be analyzed immediately, as per 40 CFR 136.3.

Other Effluent Limitations:

1) Fecal Coliform

The discharge from this facility is into a water body which has a designated use of Primary Contact Recreation. According to LAC 33:IX.1113.C.5.b.i, the fecal coliform standards for this water body are 200/100 ml and 400/100 ml. Therefore, the limits of 200/100 ml (Monthly Average) and 400/100 ml (Weekly Average) are proposed as Fecal Coliform limits in the permit. These limits are being proposed through Best Professional Judgement in order to ensure that the water body standards are not exceeded, and due to the fact that existing facilities have demonstrated an ability to comply with these limitations using present available technology.

2) pH

According to LAC 33:IX.3705.A.1., POTW's must treat to at least secondary levels. Therefore, in accordance with LAC 33:IX.5905.C., the pH shall not be less than 6.0 standard units nor greater than 9.0 standard units at any time.

3) Solids and Foam

There shall be no discharge of floating solids or visible foam in other than trace amounts in accordance with LAC 33:IX.1113.B.7.

X. PREVIOUS PERMITS:

LPDES Permit No. LA0123161: none issued

XI. ENFORCEMENT AND SURVEILLANCE ACTIONS:

A) Inspections

This is a new facility. No inspections have been performed for this facility.

B) Compliance and/or Administrative Orders

This is a new facility. No enforcement actions have been administered against this facility

C) DMR Review

This is a new facility. No DMRs have been submitted for this facility.

XII. ADDITIONAL INFORMATION:

PERMIT REOPENER CLAUSE

In accordance with LAC 33:IX.2361.C.3, this permit may be modified, or alternatively, revoked and reissued, to comply with any applicable effluent standard or limitations issued or approved under sections 301(b)(2)(c) and (D); 304(b)(2); and 307(a)(2) of the Clean Water Act, if the effluent standard or limitations so issued or approved:

a) Contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or

b) Controls any pollutant not limited in the permit; or

c) Requires reassessment due to change in 303(d) status of waterbody; or

d) Incorporates the results of any total maximum daily load allocation, which may be approved for the receiving water body. The LDEQ will be conducting TMDLs in the Lake Pontchartrain Basin Segment 040304. The Department of Environmental Quality reserves the right to impose more stringent discharge limitations and/or additional restrictions as a result of the TMDL. Therefore, prior to upgrading or expanding this facility, the permittee should contact the Department to determine the status of the work being done to establish future effluent limitations and additional permit conditions.

Final effluent loadings (i.e. lbs/day) have been established based upon the permit limit concentrations and the design capacity of 0.75 MGD.

Effluent loadings are calculated using the following example:
CBOD: 8.34 lb/gal x 0.75 MGD x 5 mg/l = 31 lb/day

At present, the **Monitoring Requirements, Sample Types, and Frequency of Sampling** as shown in the permit are standard for facilities of flows between **0.5** and **1.0** MGD.

MERCURY MINIMIZATION PROGRAM PLAN

The permittee will be required to develop a Mercury Minimization Program Plan (MMPP) within one year of permit issuance. This is based on the application submitted for Juban Crossing.

Studies on sanitary wastewater treatment plants indicate that trace levels of mercury can be present in discharges from these facilities. Doctor's offices, dentist, and schools may be sources of mercury. Dischargers within mercury impaired watersheds with possible mercury contributors need to evaluate their potential to discharge mercury in order to demonstrate that a facility is discharging at levels consistent with the TMDL (below 12 ng/l). Thus, the requirement for the development of a MMPP is included in the permit instead of an effluent limitation. A reopener clause is in the permit to allow for effluent limitations and requirements if needed based on analytical results from sampling required in the MMPP or a TMDL Study.

Pretreatment Requirements

Based upon consultation with LDEQ pretreatment personnel, standard pretreatment language has been included in the permit.

XIII TENTATIVE DETERMINATION:

On the basis of preliminary staff review, the Department of Environmental Quality has made a tentative determination to issue a permit for the discharge described in this Statement of Basis.

XIV REFERENCES:

Louisiana Water Quality Management Plan / Continuing Planning Process, Vol. 8, "Wasteload Allocations / Total Maximum Daily Loads and Effluent Limitations Policy," Louisiana Department of Environmental Quality, 2005.

Louisiana Water Quality Management Plan / Continuing Planning Process, Vol. 5, "Water Quality Inventory Section 305(b) Report," Louisiana Department of Environmental Quality, 1998.

Louisiana Administrative Code, Title 33 - Environmental Quality, Part IX - Water Quality Regulations, Chapter 11 - "Louisiana Surface Water Quality Standards," Louisiana Department of Environmental Quality, 2004.

Louisiana Administrative Code, Title 33 - Environmental Quality, Part IX - Water Quality Regulations, Subpart 2 - "The LPDES Program," Louisiana Department of Environmental Quality, 2004.

Low-Flow Characteristics of Louisiana Streams, Water Resources Technical Report No. 22, United States Department of the Interior, Geological Survey, 1980.

Index to Surface Water Data in Louisiana, Water Resources Basic Records Report No. 17, United States Department of the Interior, Geological Survey, 1989.

LPDES Permit Application to Discharge Wastewater, Creekstone Juban I, LLC, Juban Crossing, August 7, 2007.